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TOYA115.014APC

PATENT



IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant : Kimura, et al.
Appl. No. : 10/535,582
Filed : May 18, 2005
For : METHOD OF IMMOBILIZING
BIOMOLECULE TO METALLIC
CARRIER
Examiner : Unknown

Group Art Unit 1651

CERTIFICATE OF MAILING

I hereby certify that this correspondence and all marked attachments are being deposited with the United States Postal Service as first-class mail in an envelope addressed to: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450, on

January 3, 2006

(Date)

Che S. Chereskin

Che Swyden Chereskin, Ph.D., Reg. No. 41,466

REQUEST FOR CORRECTED FILING RECEIPT

Commissioner for Patents
P.O. Box 1450
Office of Initial Patent Examination
Customer Service Center
Alexandria, VA 22313-1450

Dear Sir:

Applicants hereby request that the Official Filing Receipt, a copy of which is enclosed, be corrected to reflect the amended title of the invention. The correct title should be METHOD OF IMMOBILIZING BIOMOLECULE TO METALLIC CARRIER. Presently, the Filing Receipt incorrectly shows the title as Method of Fixing Biomolecule on Metal Support. Documents supporting this requested correction are attached.

Respectfully submitted,

KNOBBE, MARTENS, OLSON & BEAR, LLP

Dated: Jan 3, 2006

By: *Che S. Chereskin*

Che Swyden Chereskin, Ph.D.

Registration No. 41,466

Agent of Record

Customer No. 20,995

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2252401\122905

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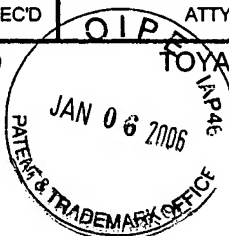


UNITED STATES PATENT AND TRADEMARK OFFICE

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APPL NO.	FILING OR 371 (c) DATE	ART UNIT	FIL FEE REC'D	ATTY. DOCKET NO	DRAWINGS	TOT CLMS	IND CLMS
10/535,582	05/18/2005	1651	900	TOYA115.014APC	1	8	2

20995
KNOBBE MARTENS OLSON & BEAR LLP
2040 MAIN STREET
FOURTEENTH FLOOR
IRVINE, CA 92614



CONFIRMATION NO. 1733

FILING RECEIPT



OC000000017346735

Date Mailed: 12/09/2005

Receipt is acknowledged of this regular Patent Application. It will be considered in its order and you will be notified as to the results of the examination. Be sure to provide the U.S. APPLICATION NUMBER, FILING DATE, NAME OF APPLICANT, and TITLE OF INVENTION when inquiring about this application. Fees transmitted by check or draft are subject to collection. Please verify the accuracy of the data presented on this receipt. If an error is noted on this Filing Receipt, please mail to the Commissioner for Patents P.O. Box 1450 Alexandria Va 22313-1450. Please provide a copy of this Filing Receipt with the changes noted thereon. If you received a "Notice to File Missing Parts" for this application, please submit any corrections to this Filing Receipt with your reply to the Notice. When the USPTO processes the reply to the Notice, the USPTO will generate another Filing Receipt incorporating the requested corrections (if appropriate).

Applicant(s)

Naoki Kimura, Chiba-shi, JAPAN;
Ryuichi Oda, Chiba-shi, JAPAN;

Power of Attorney: The patent practitioners associated with Customer Number 20995.

Domestic Priority data as claimed by applicant

This application is a 371 of PCT/JP03/15010 11/25/2003

Foreign Applications

JAPAN 2002-340464 11/25/2002

Projected Publication Date: To Be Determined - pending completion of Security Review

Non-Publication Request: No

Early Publication Request: No

Title

~~Method of fixing biomolecule on metal support~~

=> b Method of Immobilizing Biomolecule to Metallic Carrier

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Preliminary Class

435

PROTECTING YOUR INVENTION OUTSIDE THE UNITED STATES

Since the rights granted by a U.S. patent extend only throughout the territory of the United States and have no effect in a foreign country, an inventor who wishes patent protection in another country must apply for a patent in a specific country or in regional patent offices. Applicants may wish to consider the filing of an international application under the Patent Cooperation Treaty (PCT). An international (PCT) application generally has the same effect as a regular national patent application in each PCT-member country. The PCT process **simplifies** the filing of patent applications on the same invention in member countries, but **does not result** in a grant of "an international patent" and does not eliminate the need of applicants to file additional documents and fees in countries where patent protection is desired.

Almost every country has its own patent law, and a person desiring a patent in a particular country must make an application for patent in that country in accordance with its particular laws. Since the laws of many countries differ in various respects from the patent law of the United States, applicants are advised to seek guidance from specific foreign countries to ensure that patent rights are not lost prematurely.

Applicants also are advised that in the case of inventions made in the United States, the Director of the USPTO must issue a license before applicants can apply for a patent in a foreign country. The filing of a U.S. patent application serves as a request for a foreign filing license. The application's filing receipt contains further information and guidance as to the status of applicant's license for foreign filing.

Applicants may wish to consult the USPTO booklet, "General Information Concerning Patents" (specifically, the section entitled "Treaties and Foreign Patents") for more information on timeframes and deadlines for filing foreign patent applications. The guide is available either by contacting the USPTO Contact Center at 800-786-9199, or it can be viewed on the USPTO website at <http://www.uspto.gov/web/offices/pac/doc/general/index.html>.

For information on preventing theft of your intellectual property (patents, trademarks and copyrights), you may wish to consult the U.S. Government website, <http://www.stopfakes.gov>. Part of a Department of Commerce initiative, this website includes self-help "toolkits" giving innovators guidance on how to protect intellectual property in specific countries such as China, Korea and Mexico. For questions regarding patent enforcement issues, applicants may call the U.S. Government hotline at 1-866-999-HALT (1-866-999-4158).

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Title 35, United States Code, Section 184
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TOYA115.014APC

PATENT



IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant : Kimura, et al.
Int'l Appl. No. : PCT/JP03/15010
Int'l filing date : November 25, 2003
For : METHOD OF IMMOBILIZING
BIOMOLECULE TO METALLIC
CARRIER (amended)
Examiner : unknown
Group Art Unit : unknown

PRELIMINARY AMENDMENT

Mail Stop Amendment
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Dear Sir:

Preliminary to examination on the merits, please amend the above-captioned U.S. application as follows.

Amendments to the Specification begin on page 2 of this paper.

Amendments to the Claims are reflected in the listing of claims which begins on page 3 of this paper.

Remarks begin on page 5 of this paper.

Int'l Appl. No. : PCT/JP03/15010
Int'l filing date : November 25, 2003

AMENDMENTS TO THE SPECIFICATION

In the Title:

Please change the title as follows:

METHOD OF ~~FIXING~~ IMMOBILIZING BIOMOLECULE ON ~~METAL~~ SUPPORT TO
METALLIC CARRIER

In the specification:

On page 1 of the Specification, after the Title of the Invention and before the Technical Field statement starting on line 1, please insert the following section:

Related Applications

This application is the U.S. National Phase under 35 U.S.C. § 371 of International Application PCT/JP03/15010, filed November 25, 2003, which claims priority of JP 2002-340464, filed November 25, 2002.

On page 34 before Claim 1, please amend as follows:

WHAT IS CLAIMED IS: ~~CLAIMS~~

AMENDMENTS TO THE CLAIMS

1. (Original) A method of immobilizing a biomolecule on a carrier, comprising the steps of:
 - spotting a solution of the biomolecule on the carrier; and
 - irradiating the carrier spotted with the solution of the biomolecule with an ultraviolet ray containing a component having a wavelength of 280 nm,wherein the carrier is made of a metal.
2. (Original) The method according to claim 1, wherein the ultraviolet ray contains a component having a wavelength of 220 to 300 nm.
3. (Currently amended) The method according to claim 1[[or 2]], wherein the metal is a metal selected from Groups I, II, III, IV, V, VI, ~~and or~~ VII of second to seventh periods and transition elements in a periodic table, or an alloy containing any of these metals.
4. (Currently amended) The method according to ~~any one of claims 1 to 3~~ claim 1, wherein the irradiation dose of the ultraviolet ray is 100 mJ/cm² or more.
5. (Currently amended) The method according to ~~any one of claims 1 to 4~~ claim 1, wherein the biomolecule is selected from a nucleic acid, protein, saccharide, antigen, antibody, peptide, ~~and or~~ enzyme.
6. (Original) A method of producing a biomolecule-immobilized carrier in which a biomolecule is immobilized on a carrier, comprising the steps of:
 - spotting a solution of the biomolecule on the carrier; and
 - irradiating the carrier spotted with the solution of the biomolecule with an ultraviolet ray containing a component having a wavelength of 280 nm to immobilize the biomolecule on the carrier.

7. (Original) The method according to claim 6, wherein the ultraviolet ray contains a component having a wavelength of 220 to 300 nm.

8. (Original) The method according to claim 6, wherein the biomolecule comprises a nucleic acid, and the nucleic acid-immobilized carrier is used for analysis of the nucleic acid by hybridization.

Int'l Appl. No. : PCT/JP03/15010
Int'l filing date : November 25, 2003

REMARKS

Claims 3-5 have been amended to conform with the rules of practice before the U.S. Patent and Trademark Office. The specification has been amended to recite the International Application and priority application. The word "CLAIMS" has been deleted and substituted by "WHAT IS CLAIMED IS" so that subsequently appearing claims will be the object of a sentence as specified by M.P.E.P. section 608.01(m). Claims 1-8 are presented for examination. No new matter is added by this amendment.

Enclosed herewith are: (1) a paper copy of the Sequence Listing, and (2) computer readable version of the Sequence Listing (2 disks).

VERIFICATION UNDER 37 C.F.R. § 1.821 (f)

All of the sequences in the attached Sequence Listing are included in the application as filed. As required under 37 C.F.R. § 1.821 (f), I hereby verify that the data on the enclosed disk and the paper copies of the Sequence Listing are identical.

Conclusion

Should there be any questions concerning this application, the Examiner is invited to contact the undersigned agent at the telephone number appearing below. Please charge any additional fees, including any fees for additional extension of time, or credit overpayment to Deposit Account No. 11-1410.

Respectfully submitted,

KNOBBE, MARTENS, OLSON & BEAR, LLP

Dated: May 13, 2005

By: Che S. Chereskin

Che Swyden Chereskin, Ph.D.

Registration No. 41,466

Agent of Record

Customer No. 20,995

(949) 760-0404

**DECLARATION AND POWER OF ATTORNEY - USA PATENT APPLICATION**

As a below named inventor, I hereby declare that:

My residence, post office address and citizenship are as stated below next to my name;

I believe I am the original, first and sole inventor (if only one name is listed below) or an original, first and joint inventor (if plural names are listed below) of the subject matter which is claimed and for which a patent is

sought on the invention entitled **METHOD OF IMMOBILIZING BIOMOLECULE TO METALLIC CARRIER**

the specification of which:

- (a) ☐ is attached hereto; or
- (b) ☐ was filed on _____ as Application
No. _____ or Express Mail No., as Application No. not
yet known _____ and was amended
on _____ (if applicable); or
- (c) ☒ was described and claimed in PCT International Application No.
PCT/JP2003/015010 filed on November 25, 2003
and as amended under PCT Article 19 on _____
(if any) and/or under PCT Article 34 on _____ (if any).

I hereby state that I have reviewed and understand the contents of the above identified specification, including the claims, as amended by any amendment referred to above;

I acknowledge the duty to disclose information which is material to the patentability of this application in accordance with Title 37, Code of Federal Regulations, § 1.56;

I hereby claim foreign priority benefits under Title 35, United States Code, § 119 of any foreign application(s) for patent, design or inventor's certificate or any PCT international application(s) listed below and have also identified below any foreign application(s) for patent, design or inventor's certificate or any PCT international application(s) designating at least one country other than the United States of America filed for the same subject matter having a filing date before that of the application(s) of which priority is claimed:

PRIOR FOREIGN APPLICATION(S)

COUNTRY (OR INDICATE IF PCT)	APPLICATION NUMBER	DATE OF FILING (day, month, year)	PRIORITY CLAIMED UNDER 37 U.S.C. § 119	
Japan	2002-340464	25/November/2002	<input checked="" type="radio"/> YES	NO <input type="radio"/>
			<input type="radio"/> YES	NO <input type="radio"/>
			<input type="radio"/> YES	NO <input type="radio"/>
			<input type="radio"/> YES	NO <input type="radio"/>

I hereby claim the benefit under Title 35, United States Code, § 120 of any United States application(s) listed below, and insofar as the subject matter of each of the claims of this application is not disclosed in the prior United States application in the manner provided by the first paragraph of Title 35, United States Code § 112, I

acknowledge the duty to disclose to the U.S. Patent and Trademark Office all information known to me to be material to patentability as defined in Title 37, Code of Federal Regulations, § 1.56, which became available between the filing date of the prior application and the national or PCT international filing date of this application:

Prior U.S.A. Application(s)

Application No.: _____ Filing Date: _____ Status: _____

POWER OF ATTORNEY: I hereby appoint the registrants of Knobbe, Martens, Olson & Bear, LLP, 620 Newport Center Drive, Sixteenth Floor, Newport Beach, California 92660, Telephone (949) 760-0404, Customer No. 20,995.

I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful, false statements may jeopardize the validity of the application or any patent issued thereon.

Full name of sole or first inventor: Naoki KIMURA

Inventor's signature Naoki Kimura Day 9th Month March Year 2005

Residence (city and country): Chiba-shi, Japan

Citizenship: Japanese

Post Office Address: c/o NISSHINBO INDUSTRIES, INC. R & D Center, 1-2-3, Onodai, Midori-ku, Chiba-shi,
Chiba 267-0056 Japan

Full name of second inventor: Ryuichi ODA

Inventor's signature Ryuichi Oda Day 9th Month March Year 2005

Residence (city and country): Chiba-shi, Japan

Citizenship: Japanese

Post Office Address: c/o NISSHINBO INDUSTRIES, INC. R & D Center, 1-2-3, Onodai, Midori-ku, Chiba-shi,
Chiba 267-0056 Japan

Full name of third inventor: _____

Inventor's signature _____ Day _____ Month _____ Year _____

Residence (city and country): _____

Citizenship: Japanese

Post Office Address: _____

Send Correspondence To:
KNOBBE, MARTENS, OLSON & BEAR, LLP
Customer No. 20,995
PF-33

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